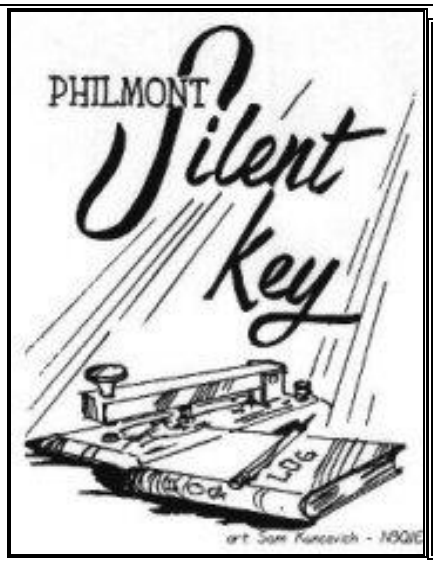
The Blurb

Newsletter of The Phil-Mont Mobile Radio Club
66 Years of Public Service, 1949 to 2015

Volume 66 Number 5 www.phil-mont.org May 2015

The Board of Directors' Meeting is on the 6th
The General Membership Meeting is on the 13th at the
Willow Grove Giant Supermarket 2nd Floor
Note new Time: Both begin at 7:00



Dr. Arnie KC2HX with Jim Spencer W3BBB

It is with extreme sadness that I announce the passing of my and our old friend and club member, Arnold Sadwin, KC2HX. "Dr. Arnie" has been a Phil-Mont member for over forty-five years. He and Sue, N2CYA, have supported Phil-Mont and Amateur Radio for many decades. They have been gracious hosts for many club events and activities at their homes in Cherry Hill and Brandt Beach on Long Beach Island.

Phil-Mont sends their sympathy to Sue, Stuart, Donna, Lori and their spouses and children. I will personally miss the phone calls, "Ed, could you come over and get my radio back on the repeater?" Arnie, your signal will be heard forever. - Ed Masarsky KB3IV *Full obituary on page 6*

Amazing, informative articles by Bob W3NE and Ed KB3IV!
Welcome to New Members!
New PMRC Yahoo Group!

The Blurb is published monthly by and for the members of The PHIL-MONT MOBILE RADIO CLUB, Inc., whose purpose is to promote Amateur Radio in general, and Mobile Radio in particular. ***Copying and quoting*** is permitted with a credit line. We gladly exchange publications with other amateur radio clubs. Requests should be sent to the Editor: *Rick DeVirgiliis ND3B@ARRL.net*

Subscriptions are available to non-members for $12, addressed to the Treasurer.

Labels and mailing: **KB3IV**

Submissions deadline: All copy must be in the hands of the Editor by the 20th of the previous month.

Contact Phil-Mont: P.O. Box 404 Warminster, PA 18974
http://www.phil-mont.org
Website: Eric N3QV & Andrew KC2PMW

For club information: Contact any club officer, or the repeaters listed below. Address or club directory changes and articles for the membership e-mail list should be sent to: KB3IV

Sunday Morning Net Schedules

- **2 Meter/ 70cm Net**..... at 0930L on W3QV repeater
- **10-on-10 Net** ..... at 1000L 28.393 MHz USB (±QRM)
- **75 meter Net** ..... at 1020L 3.993 MHz LSB
- **ARES** at 2100L on the W3QV repeater

Committees

Blurb folding: KB3IV & N3GLU
Directory: KB3IV
Field Day: KC2PMW
Fusion Coord: NC3U

Internet: N3QV & KC2PMW
Membership: K3HWG
Net Control: KB3IV

Program: W3AOK
Publicity: W3RM
Refreshments: W3AOK
Repeater: W3AOK

Scholarship: W3RM
Sunshine: N3GLU
VE Program: NS3K
Welcome: N3UBY
Youth: KC2PMW

All visitors are welcome!

The club meets at 7:00 PM on the *second* non-holiday Wednesday each month except July and August at Giant Supermarket, 315 York Rd, Willow Grove, PA
Maps and directions are available at www.phil-mont.org.

License Examinations are held on the fourth **non-holiday Thursday** each month at **Community Ambulance Association, 1414 E. Butler Pike, Ambler PA 19002**
Registration begins at 7:00 P.M. Applicants should contact Jim McCloskey NS3K at 215-275-2979 or jmccloskey@msn.com for the latest information.

Club Stations **W3QV/R: The Jim Spencer Memorial Repeater System**
Ridge & Port Royal Avenues, Philadelphia, PA ***Trustee:*** **W3RM**
147.03 MHz + PL 91.5 Hz 444.80 MHz + PL 186.2 Hz
Reach us on EchoLink through W3QV-R
W3AA *Trustee:* WU3I
W3EM: Field Day/special event station *Trustee:* N3QV

The Officers

President: **WA3GM Greg Malone wa3gm@yahoo.com**

Vice President: **W3AOK Bill Popovic w3aok@verizon.net**

Treas: **KB3IV Ed Masarsky kb3iv@comcast.net**

Secretary: **WU3I Steve Hoch steven.hoch@verizon.net**

The Prez Sez …

Well Spring is here and the Daffodils are finally springing up throughout the yard and more importantly the "Black Gold" is running less through the heater so that is always a good thing.

With spring time here that means that Field Day is just around the corner. June 27 & 28 will be the dates this year. We will again be at Ft. Washington State Park 420 Militia Hill Rd, Fort Washington, PA 19034.
Our Field Day Coordinator for this year is Al W3STW. Band Captains please get in touch with Al W3STW ASAP so we can firm up plans. All members are encouraged to come out and visit and more importantly operate during field day. If you can provide any advance notice of the times you can operate that would be much appreciated. This is NOT a fast paced contest type environment. This is a fun family type environment as well as checking our readiness for emergency type operations so come out and join us. This would be a good opportunity to bring the kids and the grandkids so they can operate. As if that was not enough to peak your interest we again have our very own "Guy Fieri" aka Steve" WU3I providing us with meals throughout the weekend. Come savor whatever delicacies Steve has in store for us.

The Phil-Mont general meeting in April was most informative and again very well attended by members and visitors. I would like to thank Michael, KB1JEY for his fine presentation on mobile installation. Michael did a great job and his slide show provided a wealth of useful information.

The following is a list of speakers for our meetings for the next few months:

May 13 2015: D RATS… What is it?? A Multi-Platform Integrated tool for communications with D Star Radios. Come join Patrick N3TSZ as he presents this most interesting program on one of today's popular digital systems.

June 10 2015: "Capacitors: What are they and how they work." Professor Barry Feirman K3EUI of our Digital Education Net will fill us in on capacitors along with some Demos for the audience to analyze, etc.

July/August Summer Break

September 9, 2015: Remote Operations. Greg WA3GM and Steve WU3I will present a short demo on working remote when it is not practical to bring Radios and antennas on vacation, etc…

The Holmesburg Amateur Radio Club would like to pass on their sincere thanks to our own Doug Crompton WA3DSP for his great presentation on the All Star Network at their April Meeting last week. Doug put on a good demonstration and thanks to Ed KB3IV who also helped by checking in using various modes… I see some more all-star nodes popping up in the future.

If anyone has any suggestions for a speaker or would like to speak at one of our meetings please let any of the club officers or board members know. Your input is vital and we welcome all suggestions.

Don't forget to sign up for the Phil-Mont Yahoo Group. We currently have 40+ members. This is a good way to share ideas amongst the membership. Thanks to Sal NC3U for starting and moderating the group. For more info and to join the group contact Sal.

See you all at the next meeting.

73, Greg WA3GM

Phil-Mont Birthdays &Tidbytes

May Birthdays

MAY BIRTHDAYS
05 Paul Policarpo - N3PP
Patrick Taylor - W3HVG

15 Doug Crompton - WA3DSP
James Kavanagh - WQ3H

17 Herb Scott - N3OLK

28 Peggy Kaufmann - KB3DID
29 Maggie Leber - K3XS
30 Bill Chedeville - W3GQD

MEMBERSHIP STATS
At press time P.M.R.C. has:
97 Full paid members
11 Family members
1 Youth members
1 Honorary member
5 Pending

ARRL VEC

The April VE session yielded 3 new tech and 5 general tickets.

Bravo VE team!

The VE Thursday evening session is on the 28th this month.

As always, many thanks to our VE team!

From the Secretary

Minutes of the Board meeting 4/1/2015

WA3GM opened the meeting at 7:08PM. In Attendance were; W3STW, WA3GM, WA3DSP, WU3I, K3HWG, KB2ERL, NC3U, W3AOK, WA3KIO, KB3IV, ND3B and W3HVG.
W3STW made the motion to waive the reading of the minutes of the preceding meeting. ND3B seconded. Motion carried.
New Members
The Board unanimously voted to accept new member applicant W3HVG. WELCOME PAT!
Repeater
W3AOK reported the fusion repeater is back and will be installed soon.

Treasury - KB3IV reported on the expenses and income of the last 2 months. Dues, Contributions, Initiation Fees and 50/50 brought in $1090.00 and Field Day reservations and 3 months internet service at the repeater disbursed $200.00.
Dues have come in very well this year.

Programs - W3AOK reported on the May Program of remote operation of and HF station.

Fusion - NC3U reported 147.165 working well and the 447.475 PDR repeater is On Line.
KB3IV reminded all that we have 2 Digital rigs available for loan if you are interested contact ED and he will program the radio for your preferences.

BLURB - ND3B reported that the elevator at BLURB World HQ is still out. But keep those articles coming.

Membership - K3HWG is looking for a cost effective badge producer. He was referred to Createabadge.com. If you know somewhere to have badges made contact Bill.

Field Day - New Field Day Coordinator W3STW. Please contact AL to be a band Captain. 75 is already taken.

NEW BUSINESS
KB2ERL brought forth discussion on making the Board meeting every other Month. A Motion was made by KB2ERL to return to every other month starting in September and meeting on the ODD Months. ND3B seconded. Motion carried.

NC3U brought forth discussion to start a Yahoo Group for PMRC Members Only. After discussion ND3B made the motion to form the group with NC3U as Moderator. KB3IV Seconded. Motion carried.

KB3IV brought up the idea of Club Shirts referring us to the Website customink.com. Stop by and take a look and let your board know how you feel.

At 8:25PM WU3I made the motion to close the meeting. ND3B Seconded.

Minutes of the General Meeting 4/8/2015

WA3GM opened the meeting at 7:21PM. There were 24 Members and 3 guests signed in.

WU3I reported that he had all the minutes up to date.

KB3IV reported that we have money and we are getting new members.

K3HWG on membership reported that we are members of TECH SOUP. This allowed the purchase of Publisher software (at a really low price) for the making of the Membership certificates.

W3AOK reported on the return of the Yaesu Digital Repeater and still working on the interface. By print time it may be back in service.
Also the program for May will be DRATS for Digital Data Transfer given by N3TSZ Patrick.
June Program will be on Remote operation given jointly by WA3GM, W3AOK and WU3I.

W3STW is coordinating the Band Captains please contact AL to be a band Captain. Please contact Steve WU3I to let him know about Meals on FD weekend. Email is the BEST! If you want to eat I need to know to have a list for totals for the four meals provided.

NC3U reported on the PMRC Yahoo Group: there are 40 members as of meeting night. The Digital radios are available for loan, please Contact KB3IV.

The program was presented by Mike KB1JEY on Mobile Radio and Antenna installation

Respectfully submitted, Steve, WU3I

PMRC is pleased to welcome These New Members

Jack Livezey KC3EOO
Springfield, Pa 19064
Technician Class

Brian Gradel KC3EQF
Willow Grove, Pa. 19090
Technician Class

Benjamin Johns K3JQH
Roslyn, Pa 19001
Extra Class

And welcome back to these Former Members returning to PMRC

Brad King WB3BPI
Newtown, Pa. 18946
General Class

Mike Errigo WB3EQW
Clearfield, Pa 16830
Advanced Class

DR. ARNOLD SADWIN, MD, aged 88, died at his home of complications following a heart attack, on Sunday, April 19, 2015. Arnold, along with all 4 of his brothers, served in WWII. Dr. Sadwin received his bachelor's degree from Boston Univ. and his medical degree from Chicago Medical School. He practiced for 59 years and is former Chief of Neuropsychiatry at Graduate Hospital and Assistant Clinical Professor of Neurology and Psychiatry at Univ. of Penn. Dr. Sadwin was a pioneer in diagnosing and treating post-concussion syndrome. He co-authored, along with fellow physicians William H. Simon and George E. Ehrlich "Conquering Chronic Pain After Injury."Over the years of his practice thousands of patients benefited from his clinical skills, compassion, and understanding. Dr. Sadwin was a kind, gentle, considerate, compassionate man of many skills and varied interests including piano, photography, sculpting, travel, and writing poetry. A true Renaissance Man. Our world is less for his passing. His greatest joy was always his family with whom he had an exceptionally close and loving relationship. He is survived by his wife of 60 years, Sue Matney Sadwin, Esq.; his children Donna Sadwin, Stuart (Valerie) Sadwin and Lori (Paul) O'Leary; his grandchildren Michael O'Leary, Allyson Sadwin, Kelly Sadwin and Moya O'Leary; and a sister Thelma Shulins. Relatives and friends are invited Mon. beginning 11:15 A.M. to **PLATT MEMORIAL CHAPELS INC., 2001 Berlin Rd., Cherry Hill NJ**, where Funeral Services will begin promptly at 12 noon. Int. Locustwood Memorial Park. Contributions can be made to Cong. B'nai Israel, 224 Prospect St., Woonsocket, RI 02895.

Figure 1 Tarheel SD ready for launch

RESTRICTED-SPACE ANTENNAS

When all else fails – *Punt!*

Bob Thomas, W3NE

This is the tale of two years with successive bouts of rejection, struggle, disappointment and expenditure of cash on a variety of antennas before finally achieving a victory (of sorts). It began with a request to management of the retirement facility at the W3NE QTH for permission to run a single wire to a tree 170 feet from our third-floor balcony. The terse answer was no. Absolutely NOT! There went any chance for a multi-band long wire in the open and clear of the noise that roars through the apartments 24/7. As related in a previous article the first reaction was to erect a rotatable magnetic loop for reception-only. It receives pretty well but local noise level is S9+ on 75 meters and S6 on 40M, although it's very low on 20M and above.

The first transmitting antenna tried was a pair of Hamsticks in a dipole arrangement, located three feet beyond the balcony railing. That configuration was balanced so there was no stray RF in the shack. However, the tuned nature of Hamsticks gave the dipole a useable bandwidth of only 40 kHz in the 80-meter band. It didn't take long to become disenchanted with having to go outside, especially in hostile weather, to adjust the length of Hamsticks' whips every time it was desirable to QSY very far. And of course band changes necessitated changing the Hamsticks themselves, which was also annoying even though they were fitted with bayonet quick-change disconnects. Finally, Hamsticks are not very efficient so they seldom produced rave signal strength reports. A short wire dipole was tried next but it had wild feed point impedance swings and was so close to our brick building most of the RF heated bricks and never got radiated.

OK, time for something radically new. A screwdriver (S.D.) antenna would solve the QSY issue but there are no grounded pipes anywhere near shack for the good RF ground required by an unbalanced antenna. Furthermore an inside trailing counterpoise wire hot with RF is a non-starter for safety reasons. Nevertheless, it was thought the

amount of ironwork in the balcony might provide an adequate ground reference for a single S.D. antenna mounted on the railing.

Two leading manufacturers of S.D. antennas, Hi-Q and Tarheel, were contacted to learn if either had customers who had success with their product as a balcony-mounted antenna. The proprietor of Hi-Q had not sold any of his antennas for that application but he volunteered the opinion that mounting one at a 45° angle to horizontal *might* work. Tarheel was called next, where "Robert," the go-to guy for advice on their products, said he had a few customers with an S.D. antenna mounted at 45° on a balcony but results varied. The best he would say was, "It might work or it might not." A local ham of fifty years' experience with most types of HF antennas thought, "It might work on some bands but not others." With those uninspiring opinions for success, the dice were rolled and an order placed for a Tarheel 100A screwdriver antenna and an Ameritron SDC-102 remote controller.

A rugged mount was fabricated from several feet of 1¼"x ¼" architectural-grade aluminum angle obtained from On-Line Metals.[1] The angle stock was cut to length, milled to 45° angles as needed, and bolted together with ¼-20 stainless steel hardware The lower end of the antenna tube was gripped between two DX Engineering resin split-insulators bolted to cross members on the mount. Brackets and special threaded clamps held the mount assembly to the balcony railing. The whole contraption looked like a rocket launcher! (Fig.1)

Performance forecasts proved to be lamentably accurate: there were a few frequencies where SWR was barely acceptable, but it was unusable on most frequencies from 3.5 to 29 MHz. Gripping the balcony railing at various places caused a slight shift in tuning. Bonding parts of the railing and the balcony's steel support structure made little improvement in its flaky SWR. Different loading coils at the base of the antenna did not make any improvement, nor did addition of a line isolator in the coax feed line. After thinking about the dismal situation, and reading many internet tutorials on mobile antennas, the realization struck that a balcony railing, regardless of the amount of ironwork in its construction, is not the same as a car. It's not the bulk of a car that provides a good ground plane for a vertical HF whip or S.D. antenna to work against; it is the *capacitance between the car and ground* which transfers the actual earth ground reference to the car itself. An unbalanced antenna on a car works against that "coupled ground" in the typical HF mobile situation.

What to do? Thoughts returned to some kind of balanced antenna which would eliminate stray RF and squirrely performance associated with unbalanced antennas in all-band operation. Since there was already one Tarheel S.D. antenna on hand, it was decided to jump in with both feet and buy another 100A and Ameritron controller to make an S.D. dipole. A twin-S.D. dipole should radiate an RF field much stronger than those weeny Hamsticks and, of equal importance, it would support frequency agility controlled from the comfort of the station operating position.

More aluminum angle was ordered along with a 6 ft. length of 2"x4"x 1/8" rectangular aluminum tube for a new support strut to hold the heavy dipole out from the balcony. A 4 ft. length of 3"x1"x1/4" UHMW (high-density polyethylene) channel from McMaster Carr[2] is bolted to the end of the strut to support the S.D. antennas without affecting their RF radiation. A Comtek[3] 1:1 current balun couples the balanced impedance of the dipole to unbalanced coax transmission line to the shack. The balun has little effect on the minor impedance mismatch between the 75-ohm dipole and 50-ohm coax. However, it is essential to convert the balanced dipole feed point to the unbalanced coax to prevent RF on the coax shield. A snap-on ferrite bead was added around the coax right at the balun to ensure complete RF suppression. Several smaller ferrite beads on each S.D. control cable isolate them from high level RF at S.D. antenna feed points. Figure 2 shows the completed antenna.

In the shack, two Ameritron controllers, for independent adjustment of each half of the dipole, are partially recessed through the top of a 5"x9"x3" chassis. Control cables to each half of the dipole plug in to the back of the chassis through Cinch-Jones connectors chassis. Each controller has LED

readouts of antenna position and ten memories that store S.D. tuning addresses. A TenTec graphic-display SWR analyzer, described last month, facilitates rapid adjustment of both sides of the dipole for a desired frequency. The two addresses are stored in memory, then all that's necessary later to rapidly QSY to that preset frequency is to recall appropriate memories, causing each S.D antenna to retune to the new frequency.

There hasn't been enough on-air experience with the S.D. dipole for a thorough evaluation but so far it has performed reasonably well on 40- and 20-Meter SSB. Operation on 75M SSB is still limited by high level local noise on the receive side although 80 CW has been rewarding with the receiver adjusted for narrow bandwidth and optimal DSP noise reduction. Everything considered, the screwdriver dipole is fulfilling most expectations for a restricted-space antenna that can be tuned on any band right from the operating position with no spurious RF floating around. It wasn't easy getting here, but the effort is finally paying off.

REFERENCES

[1] On-Line Metals: http://www.onlinemetals.com/ Good source for cut-to-size metals and plastics in sheets and most shapes. Reasonable prices.

[2] McMaster-Carr: http://www.mcmaster.com/# Supplier of stainless steel hardware, U-bolts and all-thread rod, plastics in sheet and many shapes, Neoprene rubber, cabinet hardware, lubricants, tools and general hardware. Economical, fast (usually overnight) UPS delivery on most orders.

[3]Comtec: http://www.dxengineering.com/search/product-line/comtek-jerry-sevick-w2fmi-series-current-baluns High performance current baluns with a variety of terminal locations in NEMA waterproof housings (Not plastic pipe!).

Figure 2 Twin Tarheels

I am pleased to announce the formation of the **Phil-Mont Mobile Radio Club Yahoo Group.** It is restricted to PMRC members only. This will be a valuable communication asset to all club members.

You can join the group immediately if you are a registered user of Yahoo. If you do not have a username and password for Yahoo, please sign up, it only takes one minute.

More info available from any club officer.

PMRC Yahoo Group Moderator,
Sal Marandola NC3U

Grounding Concepts

What is Ground?

A ground is defined as a low-impedance electrical connection to earth. Also a common reference point in electronic circuits. All transmitting antenna systems need a properly functioning ground system to provide for proper operator safety and efficient radiation of the maximum amount of RF energy into the air.

There are three principle forms of ground, the last two more appropriate to operating in the mobile environment:

- **Power Line Ground**: is the ground you see at the power box where your home's electrical service is connected. It is required by law and serves to provide general, overall electrical safety for your building and property.

- **DC Ground:** (Also called "Safety Ground") is familiar to the amateur as the strap or wire placed from equipment to a convenient cold water pipe or ground rod to eliminate the hazard of electrical shock. In your car it is the wire you connect from the ground stud on the rear of the radio to the negative terminal of the battery, or ideally the engine block.
- **RF Ground:** is a low-impedance path for RF to reach earth and which is designed to dissipate rather than radiate RF energy. Generally, though not in all cases, the DC Ground and the RF Ground are served by a common connection. In an automobile this point is usually the car frame or chassis, the car body or engine block.

RF Ground and The Ground Plane

In the environment of the mobile antenna system many factors contribute to the radiation of an excellent RF signal, but none more than the quality of the RF ground. The RF ground represents the "unseen half" of your antenna system. The visible half is the whip or other radiating element. Failure to construct a good RF ground inhibits the efficiency of the system's radiation and can present danger to the operator through RF feedback.

In mobile installations, the chassis or body represents a ground plane: a common circuit return or reference point for your signal.

The signal radiates outward from the radiating element and flows back to the radio via the ground plane.

Then the polarity switches and this process reverses, back and forth, in synchronization with the transmitted sine wave.

You can see, then, that if the car itself represents half of the antenna, then it's pretty important that the connections to it be made solidly and properly.

In constructing an efficient antenna system for your vehicle always make sure that your frame or car body are at RF ground by connecting them electrically and physically with the engine block. The engine block acts like a terminal strip or "bus" for your car's electrical system: the negative terminal of the battery and all other electrical grounds are connected to it as the central meeting point. The engine, in turn, is bound to the vehicle chassis through the engine mounting bolts, though not necessarily grounded! In today's modern vehicles insulating elements, i.e., rubber motor mounts are used to cushion vibration. At DC a solid path to ground exists, and even if this path should somehow fail, the car's body ground can act as a reserve. At RF frequencies however, an acceptable DC ground can sometimes present such a high impedance to your antenna system that it is, in effect, no ground at all!

To ensure your mobile antenna environment is at RF ground, simply bind the block to the chassis with tinned copper braid. Use short runs so as to avoid introducing any inductive reactance that will impede the flow of the RF current to ground.

How Can I Tell if I Have A Good Ground?

Actually, it's usually a lot easier to tell when you don't! Here are some of the signs that the quality of your mobile's RF ground may be lacking:

- Difficulty or inability to tune to an acceptable SWR match with your manual or automatic antenna tuner. (Assumes you have confirmed in advance that the antenna is already resonant "off the system".)
- Noticing a waving up and down of the SWR reading on the meter during transmitting while the vehicle is in motion.
- Noticing that the radio is "kicking", (cutting out and turning itself off) during transmission, an indication of significant RF feedback.

Getting an RF "bite" on the radio equipment or code key during transmission, an indication that excessive RF energy is feeding back from the antenna system or that the system is floating above ground potential.

Remedies require a review of how your antenna system is mounted to the car, specifically:

- Is there a good physical and electrical connection between your antenna's ground and the vehicle frame/body?
- If utilizing the body as the ground plane is there isolation from RF ground which may be causing the RF return path to float above ground potential?
- Do you have faulty shield connections along your transmission line?
- Are ground loops present in your system?

Based upon your assessment of the above, take action as necessary to clean up any weak points you uncover.

Ground Loops
Ground loops can be inadvertently created when ground connections on several pieces of equipment are connected in series, rather than to one single, centralized ground point. Ground loops happen in trying to economize when short on braid or through taking the "easy way out" while making quick connections.
As an example, visualize a station consisting of three pieces of equipment: a radio, amplifier and antenna tuner. Loops could very easily be created by connecting the ground connections of the radio to the amplifier, then the amplifier to the antenna tuner, and finally the antenna tuner to the ground stake. These series connections promote miniature loops (circuits) between each individual piece of equipment, allowing RF current to circulate at differing intensities, which are another source of radiated RF noise. As the ground circuits "float" above zero potential they never actually draw down to true ground (where, theoretically, zero RF current flows). A dangerous shock hazard to the operator can result, but is easy to avoid through good design practices.

To avoid ground loops, each of the three pieces of equipment should be tied to the same ground point. In this design, a run of flat tinned copper braid should be run from the ground terminal of each individual piece of equipment directly to the station's DC/RF ground. In the case of your home, this might represent your ground stake buried outside with, again, as short a run of flat tinned copper braid as is practical tying to it from the equipment.

Ground Loops in The Mobile Environment
In your vehicle ground loops are often unknowingly created as a consequence of frantic attempts to ground out noise sources by braiding "everything" one can think of to the nearest metal available. This is most likely when working under the hood to suppress noise in the antenna and power supply systems, but can also occur when your antenna is inadequately mounted to the frame/chassis. In reading the nature of the formation of ground loops above, you can see how, in braiding to the nearest available metal, series connections could very well have crept into your design.
Remember: if you are not at ground potential, RF currents may still be circulating within your ground system which may then be re-radiated as RF noise that can be received by the antenna system.
To eliminate any loops in your ground, the concept of applying a centralized ground point, as described earlier for a home station, applies to the mobile configuration as well. In adopting a single point for your vehicle, use the frame/chassis as your "ground stake", if you will. It is the common metal to all other metal points of your vehicle (though additional bonding techniques may ultimately be required), and provides an excellent ground plane for your vertical element to work against.

de Ed KB3IV

Also in May:

1 Space Day
BinLaden met US Navy Seals 2011
2 Kentucky derby
5 Teacher day
11 Twilight zone day
15 Chocolate chip day
16 Armed Forces day
20 Lindbergh flight 1927
21 Red Cross founded 1881
24 First Morse code message sent 1844
29 JFK born 1917

Blast from the Past

This item was retrieved from Phil-Mont documents scanned and stored on DVD by Doug, WA3DSP in his monumental effort to preserve the club's history.

Phil-Mont participated in the 1956 Field Day contest with four transmitters using the club call, W3RQZ. It was not a smooth event; during the night thunderstorms rolled through the FD site, collapsing tents and interrupting operation for several hours. Then, just before the scheduled end of the contest, it was discovered that the W3RQZ license had expired on June 7 – *two weeks before F.D.!*

Roger Phelps, FCC Engineer in Charge at Philadelphia, was informed about what had happened. He apparently took a charitable view of what could have been a serious violation and merely said none of the F.D. contacts were valid, and application for renewal of the W3RQZ license should be filed immediately. There is a terse summary on file of what happened, but nothing else appears in club records about the license gaff .– or about 1956 Field Day!

de W3NE

Robots! Flying cars! Universal health care! Oh my!

This should help!

Rats. OK on to diet plan # 664

May at Phil-Mont

3 Sun WU3I
10 Sun KB3SJS
Mother's Day
17 Sun KB3IV
24 Sun W3MHP
Memorial Day
31 Sun N3QV

Note the New net -
9:00PM Tuesday night on
29.493MHz AM mode

Don't forget the ARES net on Sunday nights and the Digital net on Tuesday nights.

--... …-- -.. . -. -.. …-- -…

For Sale

1/8" (290#) & 3/16" (380#) Dark Olive Drab Braided Cord · 100% Polyester/Dacron Knit Braided. Nice stuff! Tough and long lasting · UV Resistant and Low Stretch Proudly Made in the U.S.A.! Contact Steve WU3I at wu3i@arrl.net or 215-605-6074

YAESU FTdx-5000D w/SM-500 STATION MONITOR
In excellent shape with all original accessories and paperwork (including receipt) that came with radio and original boxes. Asking $4,100.00

Also:
ICOM IC-746PRO Comes with stock mic, SP-21 matching speaker, and matching PS-23 power supply.
In excellent shape. Asking $1,100.00

Contact email: ralfygee@gmail.com

de Ralph K3FXR

First Class Mail

The Blurb
The Phil-Mont Mobile Radio Club, Inc
1700 Street Rd. Apt. H3, Warrington PA, 18976